PLANNING DESIGN ENVIRONMENT

STATION ROAD, ROYSTON
ARBORICULTURAL IMPLICATIONS ASSESSMENT

(Report Ref: TEP.2666.001)
November 2010

for

Bowsall
Haldon House
223 Monton Road
Eccles
Manchester
M30 9PN

Version: 1.0

Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

T: 01925 844004
F: 01925 844002
E: tep@tep.uk.com
W: www.tep.uk.com

CONTENTS PAGE

1.0 INTRODUCTION 1

2.0 THE SITE AND SURROUNDINGS 2

3.0 STATUTORY PROTECTION 2

4.0 TREE POPULATION & DEVELOPMENT IMPLICATIONS 3

5.0 TREE PROTECTION REQUIREMENTS 5

6.0 ARBORICULTURAL RECOMMENDATIONS 6

7.0 SUMMARY 8

APPENDICES

Appendix 1: Arboricultural Survey Data Sheets

Appendix 2: Survey Methodology

DRAWINGS

Drawing 1: Tree Location Plan: D2666.001

Drawing 2: Tree Implications Plan: D2666.002

Drawing 3: Tree Protection Fencing: TEP.HERAS.003A

Written:	Checked:	Approved:
AM	JS	JS

1.0 INTRODUCTION

1.1 TEP has been commissioned by Bowsall to conduct an arboricultural survey of land off Station Road in Royston, Barnsley. This report details the arboricultural implications of developing the site, subsequent mitigation recommendations and protective measures.

1.2 The survey was carried out in November 2010 by means of inspection from ground level by a qualified Arboricultural Consultant. It was raining heavily during the survey.

1.3 Under *BS 5837:2005 Trees in Relation to Construction - Recommendations* the assessment of trees is made objectively. The categorisation method identifies the quality and value of the existing tree stock.

1.4 A topographical survey drawing detailing tree stem locations was used to record the position of existing trees and vegetation. For the purposes of this report we have assumed that detail on the drawing is accurate. A number of trees were not shown on the topographical survey drawing and therefore their location as noted on Drawings 1 and 2 is approximate.

1.5 A total of 13 individual trees (T1-T13) and 4 groups of trees (G1–G4) were surveyed and mapped (refer to Drawings 1 and 2). All arboricultural information recorded during the survey is presented at Appendix 1.

1.6 The nature of the soils on site was not assessed during the survey. The possibility of minor soil movement due to tree root activity cannot be discounted. The advice of a structural engineer should be sought in regard to appropriate foundation depths.

1.7 This report provides the results of the survey and includes the following:

- A schedule of all trees located within, or in close proximity to the proposed development site (Appendix 1);
- An assessment based on *BS 5837:2005*, of trees in terms of their potential value within any future development. On the basis of this assessment trees have been categorised into one of four categories: A, B, C or R (Appendices 1 & 2);
- Advice on removal, retention and management of trees (Sections 4 and 6);
- An assessment, based on *BS 5837:2005*, of the requirement for protection of trees during the construction phase (Section 5);
- A Tree Location Plan showing the position of the tree features within the survey area (Drawing 1); and
- A Tree Implications Plan detailing the sketch development proposals and trees to be retained and removed (Drawing2).

2.0 THE SITE AND SURROUNDINGS

2.1 The site is an area of rough, open grassland land located off Station Road in the village of Royston, 4 linear miles north of Barnsley, South Yorkshire.

2.2 The survey area is bounded to the west by Station Road; to the north and north east by agricultural land and to the south and east by residential housing. The site is dominated by continuous bracken and modified neutral grassland with patches of trees, dense scrub, tall ruderal herbs, acid grassland and acid/heath mosaic.

2.3 The site is dissected by a network of pedestrian desire lines representative of its frequent use by dog walkers and as a shortcut between the existing residential estate and Station Road.

2.4 Land topography slopes gently downward from east to west becoming steeper directly adjacent to Station Road.

Development Proposals

2.5 The proposed development includes the construction of 24 detached, semi-detached and mews houses with associated driveways, footpaths and landscaped gardens.

2.6 The detail of the proposals is shown on Drawing 2 and is based on a Proposed Sketch Site Layout (Ref: 10/083/0001) supplied by the client.

3.0 STATUTORY PROTECTION

Tree Preservation Orders & Conservation Area Designations

3.1 Where it is considered expedient to do so, local authorities reserve the right to create Tree Preservation Orders (TPO) to protect the amenity value conferred to a location by a tree or group of trees. Where a TPO is in force, lopping, topping, felling, uprooting or wilful damage caused to a tree is prohibited and such actions may be prosecuted and incur an unlimited fine. Works to TPO protected trees must only be undertaken with the written consent of the local authority.

3.2 Consultation with Barnsley Metropolitan Borough Council confirmed that at the time of the survey no trees on or immediately adjacent to the site were subject to Tree Preservation Orders or Conservation Area status.

Birds

3.3 Trees offer a potential nesting habitat for birds. All wild UK nesting birds, their nests and eggs are protected under the *Wildlife and Countryside Act 1981* (as amended). It is an offence to intentionally or recklessly, damage or destroy nests and all tree work should ideally be undertaken outside the bird nesting season (March to September inclusive). In addition, protection is afforded to a number of bird species listed on Schedule 1 of the *Conservation (Natural Habitats) Regulations 1994* (as amended).

3.4 If tree work is required during the nesting period then a detailed inspection of each tree should be undertaken by a qualified ecologist immediately prior to the arboricultural works. Should an active nest be found (being built, containing eggs or chicks) then any work likely to affect the nest must be halted until the nest becomes inactive.

Bats

3.5 Mature trees often contain cavities, crevices and hollows that offer potential habitats for protected species, most notably, bats. Bats and their roosts are offered protection under Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) as well as under the *Conservation of Habitats and Species Regulations* 2010.

3.6 A preliminary ground based inspection of each tree in terms of bat roost potential was undertaken during the survey. No trees on site were noted as having features that are suitable for roosting bats.

3.7 Should the presence of a bat roost be suspected whilst undertaking any works on trees and groups on site, operations must be halted until a licensed bat handler or ecologist can provide advice.

4.0 TREE POPULATION & DEVELOPMENT IMPLICATIONS

Population

4.1 A total of 13 individual trees (T1-T13) and 4 groups of trees (G1 – G4) were surveyed on site. A schedule of their species, condition, age, BS 5837:2005 quality value and management recommendations is provided at Appendix 1.

4.2 The tree population is generally of low arboricultural value comprising predominantly young to middle-aged natural regeneration. Dominant species include the pioneer species silver birch, willow and sycamore.

4.3 A number of larger, more mature trees include several goat willows (T5, T6 and T7) and a row of hawthorn trees that form the north-eastern boundary of the development site. The former of these features, although mature, are inherently short-lived species and offer limited arboricultural contribution. The hawthorn trees are a lapsed hedgerow and represent the most valuable feature in terms of ecological benefit (foraging and nesting potential) and cultural value (delineating what appears to be a historic field boundary).

4.4 Areas of dense vegetation dominate the south and western areas of the site adjacent to Station Road. These are formed from thickets of blackthorn and copses of young silver birch (refer to Drawing 1). Isolated self-set oak, birch and sycamore trees with a Diameter at Brest Height (DBH) of 75mm frequent the remainder of the site but these were not recorded due to their negligible arboricultural value.

4.5 Tree and group locations, their quality categories and canopy spreads are shown on Drawing 1.

Tree Quality Categorisation

4.6 In order for informed judgements to be made on tree retention, removal and mitigation, a recognised and consistent approach to tree valuation is required. This has been developed within the arboricultural industry and published in *BS 5837:2005 Trees in Relation to Construction – Recommendations*.

4.7 Under *BS 5837:2005 Trees in Relation to Construction – Recommendations* trees and groups are objectively assigned a quality category designed to quantify their value within any future development. Table 4.1 presents a summary of the categories presented in 'Table 1 – Cascade chart for tree quality assessment' of the British Standard. The full table has been reproduced at Appendix 2.

Table 4.1: BS 5837:2005 tree quality categorisation summary

Category A	trees of high value including those that are particularly good examples of their species and/or those that are visually dominant within the landscape.
Category B	trees of moderate value including those that do not qualify as Category A due to minor remedial defects and/or those that collectively form distinct landscape features, thereby attracting a higher rating than they might as individuals.
Category C	trees of low value, their retention should not unreasonably constrain development.
Category R	trees unsuitable for long-term retention that should ideally be removed prior to the commencement of construction unless otherwise advised.

Implications of the Proposed Development

4.8 Table 4.2 details which trees and groups come under each BS 5837:2005 quality category and whether they will require removal in order to facilitate the development proposals. This is the result of an assessment based on the Proposed Sketch Site Layout (Ref: 10/083/0001) supplied by the client.

Table 4.2: BS5837:2005 tree quality categorisation

	Tree Quality Assessment Category/Retention Value			
	A	**B**	**C**	**R**
Trees and groups that can be retained	-	G4	T1, T2, T3, T4, T8. G1	-
Trees and groups that require removal to facilitate development	-	-	T5, T6, T7, T9, T10, T11, T12, T13, G2, G3,	-

See Appendix 1, Arboricultural Data Sheets for subcategories

4.9 8 trees and 2 groups will require removal to facilitate the development proposals.

5.0 TREE PROTECTION REQUIREMENTS

Root Protection Areas (RPAs) and Construction Exclusion Zones (CEZ)

5.1 As per *BS 5837:2005*, the **RPA** is calculated using the trees diameter at 1.5 metres (refer to Appendix 1) and represents the minimum area of rooting volume that must be left undisturbed around each tree to ensure their survival.

5.2 Tree roots spread two to five times the width of the crown. The majority of tree roots are found in the top 600 mm of soil and most of the fine roots that absorb water and nutrients are found in the top 100 mm.

5.3 The morphology of roots is influenced by past and present site conditions (the presence of roads, structures and underground services), soil type, topography and drainage. This means that a tree's roots may not be uniform in their extent and the **RPA** may not be a circular area centred on the tree stem.

5.4 The RPA can be adjusted to include the canopy to prevent it being damaged by construction machinery. This area forms a **Construction Exclusion Zones (CEZ)** and will need to be detailed on a Tree Protection Plan based on a finalised and accurate layout drawing.

Protective Fencing

5.5 Protective barrier fencing will be required to demarcate a **CEZ** around retained trees in close proximity to proposed construction. This must be done prior to the commencement of any development works, including bringing machinery or materials onto site and the erection of site huts.

5.6 The fencing must be fixed into the ground to withstand accidental impact from machinery and to ensure that a sufficient protective area is maintained. Details of the recommended Heras protective fencing are shown in Drawing 3.

5.7 Any alteration to the fencing alignment to allow for approved activities will be made in agreement with the council's Arboricultural Officer.

5.8 The protective fencing must not be removed until the physical construction phase has been completed and all vehicles have been removed from site, to the satisfaction of the council's Arboricultural Officer.

Ground Contamination

5.9 Storage areas for liquids such as fuels, oil or paint should not be located within 10m of any trees on or within proximity the site due to the risk of soil contamination caused by accidental spillage.

5.10 If contamination does occur, then remediation advice should be sought from a qualified arboriculturist.

Underground Utility Issues

5.11 Guidelines set out in the National Joint Utilities Group publication *NJUG Volume 4, Guidelines for the Planning, Installation and Maintenance of Utility apparatus in Proximity to Trees* will be adhered to during excavation works close to or partially within RPAs.

5.12 NJUG Volume 4 can be downloaded free of charge from – http://www.njug.org.uk

6.0 ARBORICULTURAL RECOMMENDATIONS

Mitigation Landscaping and Post Development Management

6.1 Mitigation for the loss of trees and associated habitats will be provided in the form of replacement tree planting. The extent of mitigation planting will determined in agreement with Barnsley Metropolitan Borough Council.

6.2 The choice of replacement trees should include species of varied ultimate size and height, incorporating where possible the larger tree species with the potential to provide benefit beyond their immediate environment and to a more diverse range of ecology (for example oak, lime, beech, ash etc.).

6.3 The opportunity for the enhancement of group G4 via restocking and extension along the sites western boundary should be considered.

6.4 Aftercare is vital to the survival of newly planted trees. Provision should be made for the maintenance of newly planted trees and include watering, formative pruning and the checking of tree ties and stakes.

6.5 Hazard recommendations are based on observations at the time of survey. Trees are dynamic living organisms whose structure is constantly changing. Even those in good condition can suffer from damage or stress. Following site development, regular (annual or biannual) inspections of all retained trees should be undertaken by a qualified Arboricultural Consultant.

7.0 SUMMARY

7.1 Based on an objective assessment made in accordance with *BS 5837:2005 Trees in Relation to Construction – Recommendations*, there is 1 Category B tree group and 16 Category C tree features within the survey area.

7.2 8 trees and 2 groups will require removal to facilitate the development proposals

7.3 At the time of the survey no trees within or immediately adjacent to the site were subject to Tree Preservation Orders or within a Conservation Area. Further details can be found in Section 3.

7.4 No trees were found to have features of a size and condition desirable to bats and/or owls.

7.5 The Root Protection Area (RPA) is used to define a **Construction Exclusion Zones (CEZ)** and will need to be detailed on a Tree Protection Plan based on a finalised and accurate layout drawing.

7.6 Mitigation for the loss of trees and associated habitats will be provided in the form of replacement tree planting. The extent of mitigation planting will ultimately be determined in agreement with Barnsley Metropolitan Borough Council.

APPENDIX 1

ARBORICULTURAL SURVEY DATA SHEETS

APPENDIX 1: Arboricultural Survey Data Sheets

Surveyor JS
Date 08.11.2010
Town Royston
Site Station Road
Dwg Ref D2666.001

Ref	Species	Height	Stem Dia.	No. of stems/individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Height of Lowest Branch	Maturity	Condition	Comments on form, condition, health and significant defects	BS5837 Tree Quality Assess.	Radius of RPA guide circle	BS5837 RPA	Management Recommendations	Estimated Remaining Contribution
		(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	Young, Middle Age, Mature, Veteran	Good, Fair, Poor		A,B,C,R (1,2,3)	(m)	(m2)		Long, Medium, Short
Trees																	
T1	Sycamore	9.0	300.0	12.0	6.0	5.0	5.0	5.0	1.0	Middle Age	Good	A collection of stems forming a single sinuous crown. All stems ivy clad.	C,1	3.0	28.3		Long
T2	Silver birch	6.0	140.0	3.0	1.0	3.0	1.0	1.0	1.0	Middle Age	Good	Vigorous, self sown specimen. Basally multi-stemmed. Former loss of central leader - assumed dominance from side branch.	C,1	1.4	6.2		Long
T3	Sycamore	6.0	340.0	4.0	2.0	2.0	2.0	2.0	1.0	Middle Age	Good	Shrubby form. Growing adjacent to stone wall. Basally multi-stemmed.	C,1	3.4	36.3		Long
T4	Ash	6.0	320.0	3.0	2.0	1.0	1.0	2.0	1.0	Middle Age	Good	Vigorous, self sown tree. Basally trifurcate but all stems rooted individually. Compression fork development at base.	C,1	3.2	32.2		long
T5	Goat willow	7.0	500.0	7.0	5.0	5.0	3.0	6.0	1.0	Mature	Fair	Wide, sprawling form due to a splay of leaning stems originating form a central decaying union. Crossing stems/ branches. Deadwood in crown and several small previous branch failures.	C,1	5.0	78.5		Medium
T6	Goat willow	6.0	600.0	10.0	3.0	4.0	4.0	3.0	1.0	Mature	Fair	Typical form for species. Congested central stems	C,1	6.0	113.1		Medium
T7	Goat willow	5.0	550.0	12.0	4.0	1.0	4.0	4.0	1.0	Middle Age	Fair	Multi-stemmed at base. Crown bias northward due to competition with adjacent trees. Rooted on disturbed/undulating ground.	C,1	5.5	95.0		Long
T8	Elder	4.0	240.0	3.0	1.0	2.0	1.0	1.0	1.0	Middle Age	Good	Reasonable form for species. Rooted on moderatly steep bank approximatly 1.2m from Station Road.	C,1	2.4	18.1		Long
T9	Ash	7.0	250.0	4.0	3.0	3.0	3.0	3.0	1.0	Middle Age	Good	vigorous tree. Multi-stemmed from base. Inspection restricted by dense vegetation.	C,1	2.5	19.6		Long
T10	Goat willow	7.0	200.0	10.0	2.0	2.0	2.0	1.0	1.0	Middle Age	Good	vigorous tree. Multi-stemmed from base. Inspection restricted by dense vegetation.	C,1	2.0	12.6		Long
T11	Silver birch	8.0	460.0	3.0	4.0	3.0	3.0	4.0	1.0	Middle Age	Good	Broad form for species. All stems rooted individually but causing the development of compression forks.	C,1	4.6	66.5		Long
T12	Silver birch	8.0	210.0	1.0	1.0	1.0	1.0	1.0	1.0	Middle Age	Good	Columnar form typical to species.	C,1	2.5	20.0		Long
T13	English oak	2.0	90.0	2.0	1.0	2.0	1.0	1.0		Young	Good	Poor development potential due to a lack of apical dominance.	C,2	0.9	2.5		Long

APPENDIX 1: Arboricultural Survey Data Sheets

Ref	Species	Height	Stem Dia.	No. of stems/individuals	Crown Spread North	Crown Spread South	Crown Spread East	Crown Spread West	Height of Lowest Branch	Maturity	Condition	Comments on form, condition, health and significant defects	BS5837 Tree Quality Assess.	Radius of RPA guide circle	BS5837 RPA	Management Recommendations	Estimated Remaining Contribution
		(m)	(mm)	arising below 1.5m	(m)	(m)	(m)	(m)	(m)	Young, Middle Age, Mature, Veteran	Good, Fair, Poor		A,B,C,R (1,2,3)	(m)	(m2)		Long, Medium, Short
Groups																	
G1	Silver birch	7.0	to 200							Young to Middle Age	Good	8 trees in roughly linear group. All vigerous and of typical columnar form.	C,1	#VALUE!	#VALUE!		Long
G2	Hawthorn	5.0	to 320							Middle Age	Good	Scrubby group growing on spoil material.	C,1,2	#VALUE!	#VALUE!		Long
G3	Silver birch	5.0	to 100	7.0						Young to Middle Age	Good	Group of vigorous self-set trees.	C,2	#VALUE!	#VALUE!		Long
G4	Hawthorn	5.0	to 330							Mature	Good	Lapsed hedgerow fomring a row of fully grown trees. Demarcates the line of a historic field boundary.	B,2,3	#VALUE!	#VALUE!		Long

APPENDIX 2

SURVEY METHODOLOGY

APPENDIX 2: ARBORICULTURE SURVEY METHOD

Arboricultural surveys are conducted from ground level only. The nature of the soils on site is not assessed during the survey. The possibility of minor soil movement due to the root activity of the trees cannot be discounted; therefore, the advice of a structural engineer should be sought with regard to appropriate foundation depths.

Trees are dynamic living organisms with a constantly changing structure; even trees in good condition can suffer from damage or stress. Regular annual or bi-annual inspections by a qualified arboriculturalist can help to identify potential problems before they become acute.

The following features of each tree, group of trees or wood may have been recorded in the Arboricultural Data Sheets (Appendix One).

Species The common name is given. The Latin name may also be given if further clarification is required.

Height Top height of tree recorded in metres.

Stem Diameter For single-stemmed trees the measurement is taken at 1.5 metres above ground level and recorded in millimetres.
For multi-stemmed trees the measurement is taken directly above the root flare in millimetres.
For tree groups the measurement is taken in the same way as with single-stemmed trees and is recorded in millimetres as a range from minimum to maximum diameters.

No. of Stems A count of stems arising below a height of 1.5m.

Crown Spread The N, S, E and W branch spreads are recorded in metres to provide a representative crown shape.

Height of Lowest Branch Crown clearance above ground level recorded in metres.

Tree Age

Young	Trees than can reasonably be relocated or replaced like for like, without undue cost;
Middle Age	Trees in the established growth stage of their life with the potential to continue increasing in size;
Mature	Trees that have reached their ultimate size, given their location and surroundings;
Veteran	A tree recognised by features of a biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

Condition
An overall assessment of a tree's physiological and structural state in which factors that may increase its susceptibility to the effects of development are taken into account.

Comments
A brief evaluation and description of the tree with comments on the form, vitality, health and any significant defects that may be present.

Trees are surveyed without reference to any proposed development. The implications of any development are discussed in the Arboricultural Implication Assessment.

Tree Quality Assessment
The tree quality assessment is based on Table 1 of BS 5837:2005 (See below). Four categories (A, B, C and R) are used to denote tree quality (A = High, B = Moderate, C = Low, R = Unsuitable for retention). Subcategories (1-3) denote the specific function value of the trees and the reasoning behind the assessment (the subcategories may be used in combination but do not accumulate collective weight).

BS 5837 Root Protection Area (RPA)
The Root Protection Area (RPA) is allocated to ensure that a sufficient area is left undisturbed during development to prevent direct and indirect damage to tree roots and the soil structure.

The RPA is calculated using a mathematical equation included in BS 5837:2005 (Table 2) and is based on a trees stem diameter. In some cases the RPA may need to be adapted to ensure survival based on criteria such as the tree's condition, species and crown spread. Any alteration should be justifiable but is made at the arboriculturists discretion.

The surrounding RPA should remain undisturbed and be treated as a sacrosanct Construction Exclusion Zone (CEZ) until development completion and removal is approved by an arboriculturist.

Recommendations
Recommendations for arboricultural works, etc. are based on the **current** land use, and take into account the tree or group attributes without bias to the proposed development.

Estimated Remaining Contribution
An estimation of the trees useful life expectancy.

Long	> 40 years
Medium	20 – 40 years
Short	10 – 20 years
Very Short	< 10 years

Table 1 — Cascade chart for tree quality assessment

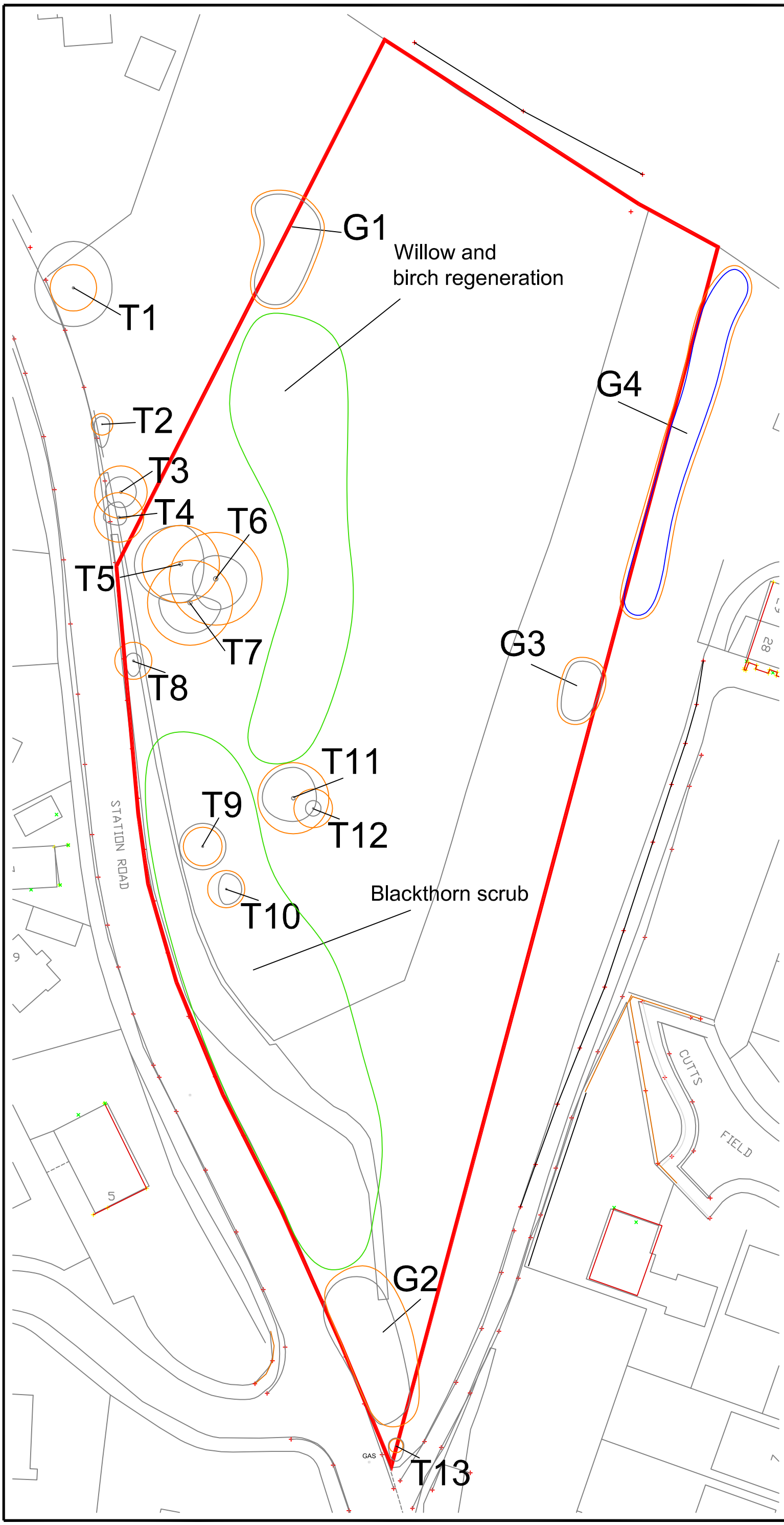
TREES FOR REMOVAL				
Category and definition	**Criteria**			**Identification on plan**
Category R Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management	• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) • Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline • Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree).			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	**Criteria — Subcategories**			**Identification on plan**
	1 Mainly arboricultural values	**2 Mainly landscape values**	**3 Mainly cultural values, including conservation**	
Category A **Those of high quality and value:** in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B **Those of moderate quality and value:** those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
Category C **Those of low quality and value:** currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150 mm	Trees not qualifying in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit	Trees with very limited conservation or other cultural benefits	GREY
	NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.			

British Standards Institute 2005, p.6

NOTE: All young trees are assessed as category 'C' quality but this does not preclude their retention within a development; all retention and removal recommendations will be detailed within the Arboricultural Implications Assessment report.

DRAWING 1

TREE LOCATION PLAN



KEY

T1 Individual trees

G1 Groups of trees

Survey boundary

Areas of dense vegetation

Trees/Groups that can be Retained

Quality Categories b ased on BS 5837 :2005 Trees in Relation to Construction - Recommendations

Category B Trees/Groups
Trees of moderate quality and value

Category C Trees
Trees of low quality and value

NOTE: see Arboricultural Data Sheets (Appendix 1) for further information.

Rev	Description	Drawn	Approved	Date

TEP
Genesis Centre
Birchwood Science Park Warrington
WA3 7BH
Tel 01925 844004
Fax 01925 844002
e-mail tep@tep.uk.com

Project

Station Road, Royston

Title

Tree Location Plan

Drwg No D2666.001

Scale 1:500 @ A3

Date 10/11/10

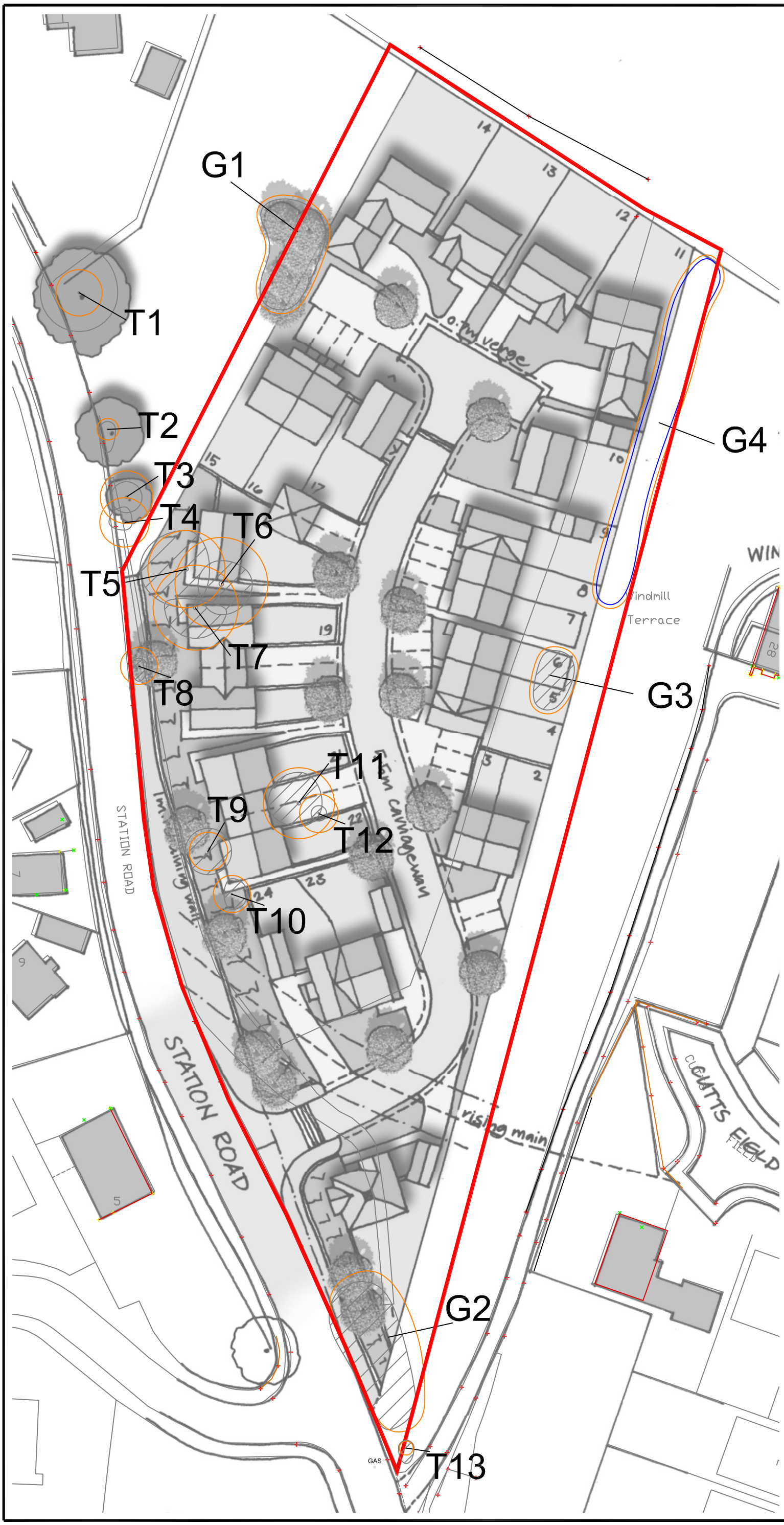
Drawn AM

Checked JS

Approved JS

DRAWING 2

TREE IMPLICATIONS PLAN



KEY

T1 Existing individual trees

G1 Groups of trees

Survey boundary

Trees/Groups that can be Retained

Quality Categories based on BS 5837 :2005 Trees in Relation to Construction - Recommendations

Category B Trees/Groups
Trees of moderate quality and value

Category C Trees
Trees of low quality and value

Trees/Groups to be Removed

Category C Trees
Trees of low quality and value

NOTE: see Arboricultural Data Sheets (Appendix 1) for further information.

Rev	Description	Drawn	Approved	Date

TEP
Genesis Centre
Birchwood Science Park Warrington
WA3 7BH
Tel 01925 844004
Fax 01925 844002
e-mail tep@tep.uk.com

Project

Station Road, Royston

Title

Tree Implications Plan

Drwg No D2666.002

Scale 1:500 @ A3

Date 10/11/10

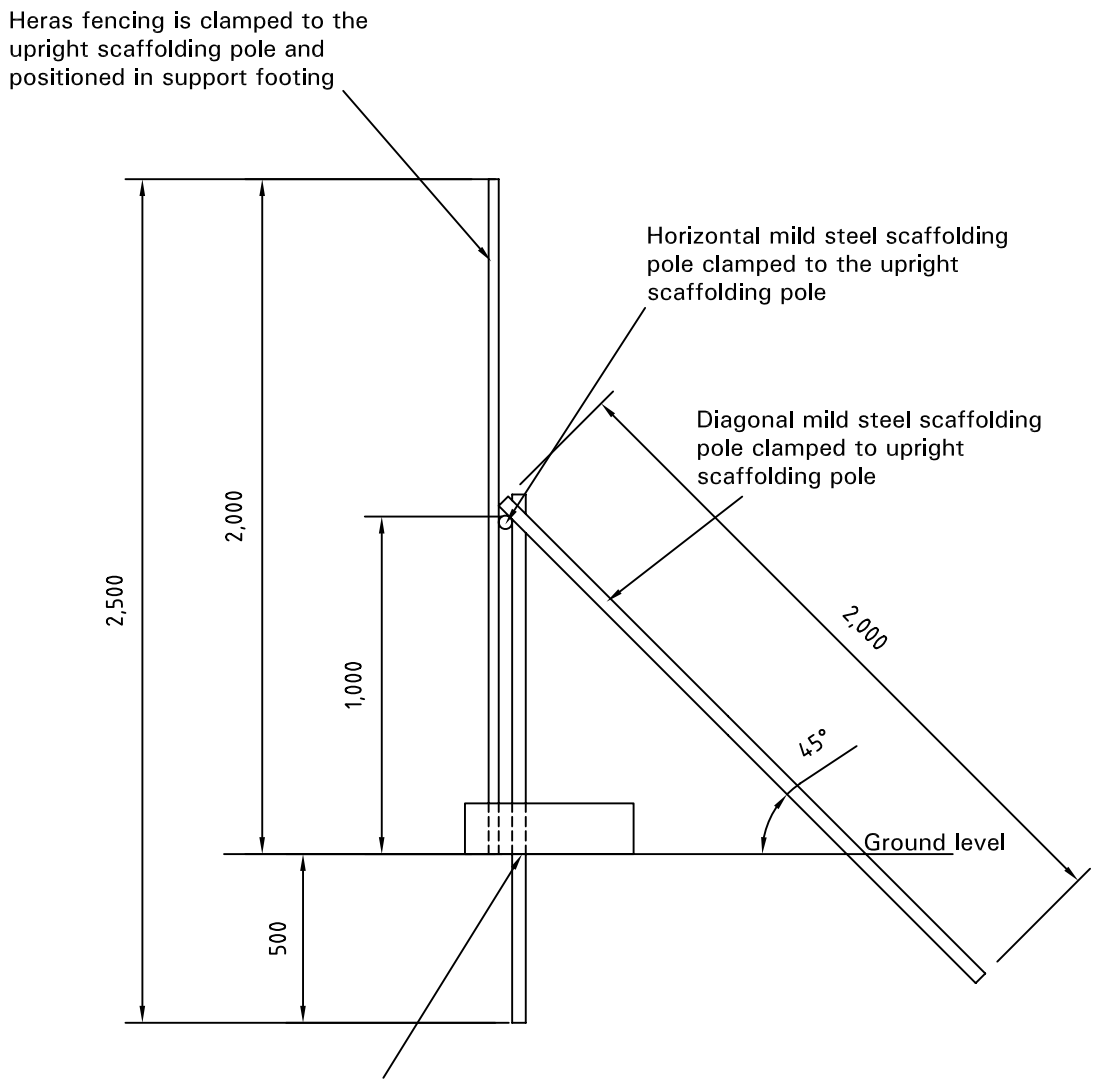
Drawn AM

Checked JS

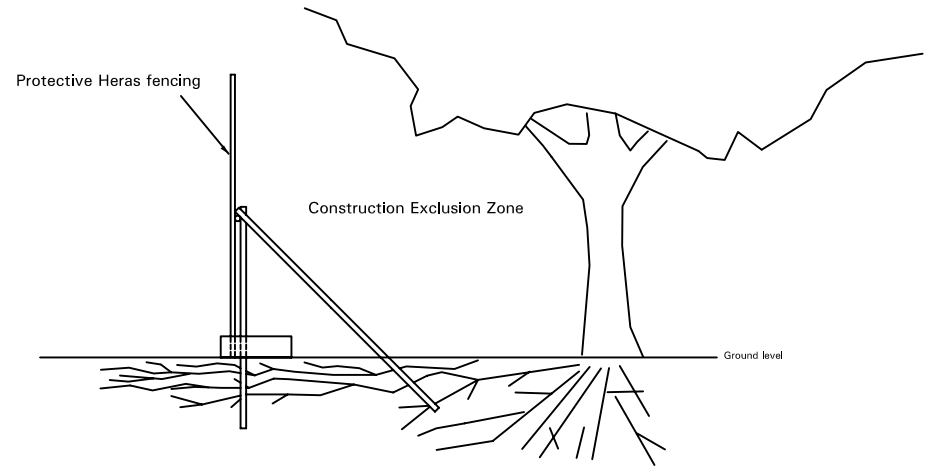
Approved JS

DRAWING 3

RECOMMENDED PROTECTIVE FENCING

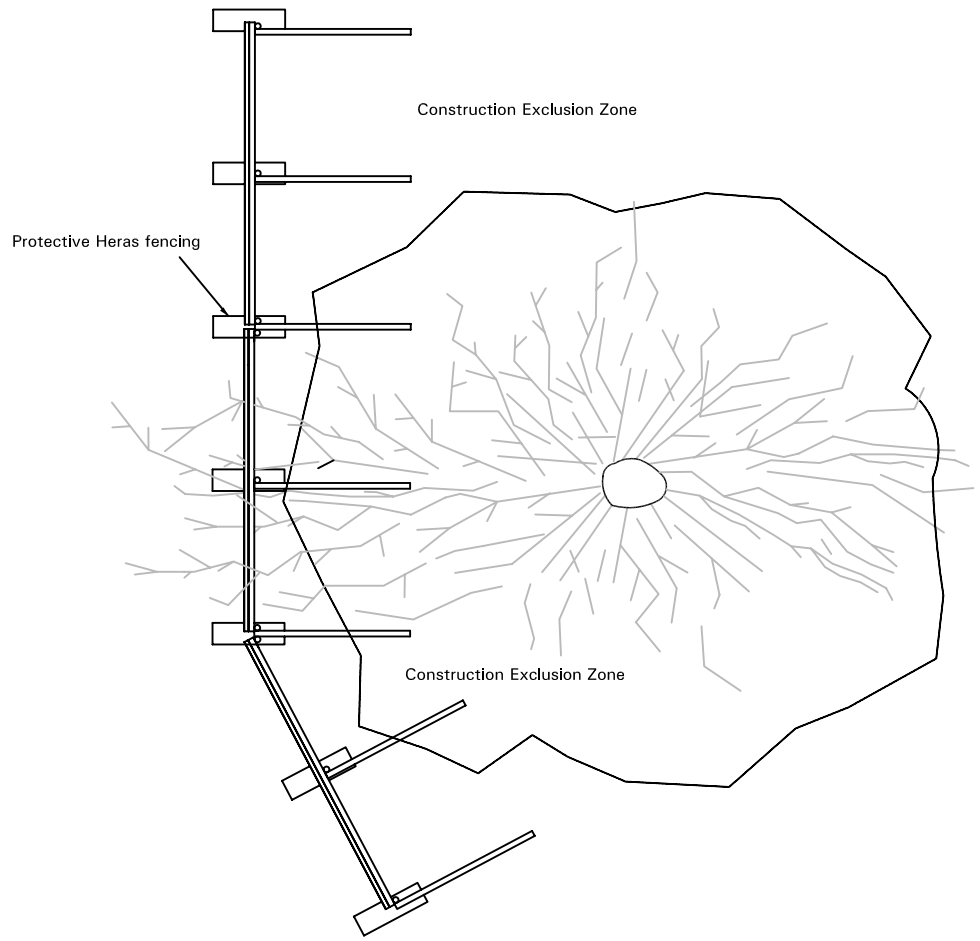


Upright scaffolding pole continues through Heras fence support footing and into the ground



Indicative section of the fence detail in relation to the protection of existing trees

Tree Protection Notice is to be attached to the fencing 1.5m from the ground, facing out of the Construction Exclusion Zone located at regular intervals along the fence line. The notice must be at least A4 in size



Indicative Plan view of the fence detail in relation to the protection of existing trees

Rev	Description	Drawn	Approved	Date
A	Change to annotation text	JS	RR	15/02/10

TEP
Genesis Centre
Birchwood Science Park Warrington
WA3 7BH
Tel 01925 844004
Fax 01925 844002
e-mail tep@tep.uk.com

Project

TEP Standard Detail

Title

Temporary supported Heras Fence Detail for Tree Protection around designated Root Protection Area / Construction Exclusion Zone.

Drwg No TEP.HERAS.003A

Scale	Date
NTS @ A3	26/01/10

Drawn	Checked	Approved
LG	JS	PM